AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A pharmaceutical composition for application at a biodegradable plate-containing site requiring new bone, cartilage or connective tissue formation in a subject, comprising a plurality of bone marrow stromal cells (MSCs) isolated from the subject;

wherein the MSCs comprise a vector comprising a DNA sequence encoding BMP-2 operably linked to a promoter, and a pharmaceutically acceptable polymer~~, and~~

~~wherein a biodegradable plate is applied to the site prior to the application of the composition~~.

2. (Original) The composition as recited in Claim 1 wherein the polymer is selected from a group consisting of alginate and collagen.

3. (Original) The composition as recited in Claim 1 wherein the MSCs are present in a concentration of about 50×10^6 per ml of the polymer.

4. (Previously Amended) The composition as recited in Claim 1 wherein the polymer is collagen type I.

5. (Previously Amended) A method of enhancing new bone, cartilage or connective tissue formation in a subject, comprising:

a. obtaining a plurality of bone marrow stromal cells (MSCs) from a subject;

b. transducing the MSCs of step a) with a vector comprising a DNA sequence encoding BMP-2 operably linked to a promoter to generate BMP-2 protein producing MSCs;

c. applying a biodegradable plate to a site requiring new bone, cartilage or connective tissue formation on the subject; and

d. applying a composition comprising the BMP-2 protein producing MSCs and a pharmaceutically acceptable polymer to the site,

such that new bone, cartilage or connective tissue formation is enhanced.

6. (Previously Amended) The method as recited in Claim 5 wherein the DNA sequence encoding BMP-2 is transferred via an adenovirus.

7. (Cancelled)

8. (Previously Amended) The method as recited in Claim 5 wherein the protein producing MSCs are topically applied in a concentration of about 50×10^6 per ml of a pharmaceutically acceptable polymer and produce an effective amount of the protein.

9. (Cancelled)

10. (Cancelled)

11. (New) The composition of claim 1 wherein the composition is a gel.

12. (New) The method of claim 5 wherein the composition is a gel.

13. (New) The composition of claim 1 wherein the biodegradable plate comprises poly(lactic acid) (PLLA).

14. (New) The method of claim 5 wherein the biodegradable plate comprises poly(lactic acid) (PLLA).